

~~correctly select between the data zones and an unacceptable result indicates the user will have problems selecting between data zones.~~

23. (Currently Amended) The method of claim 22 ~~20~~, further comprising:  
selecting a different number of data zones if the ~~user selection~~ test produces an  
unacceptable result; and  
repeating performing the ~~user selection~~ test.

24. (Currently Amended) The method of claim 22 ~~20~~, further comprising:  
selecting a different number of data zones if the ~~user selection~~ test produces  
acceptable results; and  
repeating performing the ~~user selection~~ test.

25. (Canceled).

#### **REMARKS**

In response to a Final Office Action dated August 6, 2003, the Applicant is filing a Request for Continued Examination pursuant to 37 C.F.R. § 1.114. At the time of the Final Office Action, claims 1-15 and 21-25 were pending. In this Preliminary Amendment, claim 25 is canceled and claims 1, 12 and 21-24 are amended. No new claims are being added. Accordingly, claims 1-15 and 21-24 are currently pending.

In the Final Office Action, claims 1-7, 12, 13 and 16-20 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,173,194 to Vanttila ("the Vanttila reference"). The Applicant notes that claims 16-20 were previously canceled. Accordingly,

claims 16-20 are not discussed further herein. Claims 8-11 and 14 were rejected under 35 U.S.C. § 103(a) as being obvious based on Vanttila. Claim 15 was rejected under Section 103 as being obvious in view of Vanttila in view of U.S. Patent No. 6,127,949 to Dodd (“the Dodd reference”). Finally, claims 21-25 were objected to, although no statutory basis for the objection was recited. Each of the rejections and the objection is addressed in detail below.

### **The Rejections Under 35 U.S.C. § 102**

As set forth above, claims 1-7, 12 and 13 were rejected under 35 U.S.C. § 102(e) as being anticipated based on the Vanttila reference. Specifically, the Examiner stated:

Re claims 1, 12, and 16: Vanttila discloses a data entry device 22 (col.3, line 24), which includes a key having a first data entry value associated with depressing the key 23 (col.3, lines 23-25); the key having one or more additional discrete data entry values associated with deflecting the key in a predetermined direction (col.3, lines 24-36); the key 23 having a user readable indication of each of the one or more additional discrete data entry values (col. 3, lines 37-45); and where the key is adapted for being depressed or deflected by a human fingertip (col. 3, lines 29-36), further includes a key controller system 18 for receiving state data for each key and translating the state data into a data value (col. 5, lines 20-67; col. 6, lines 1+).

Re claim 2: Vanttila teaches an apparatus, wherein the key first data entry value is a numeric data value and the one or more additional discrete data entry values are alphabetic data values (col. 3, lines 37-45).

Re claim 3: Vanttila discloses an apparatus, wherein the one or more additional discrete data values are associated with a predetermined zone/direction around a periphery of the key (col. 3, lines 46-54).

Re claim 4: Vanttila teaches an apparatus, wherein the one or more additional discrete data values are associated with an adjustable zone/direction around a periphery of the key (col. 3, lines 46-54).

Re claim 5: Vanttila discloses an apparatus, further comprising of a controllable display around the periphery of the key (col. 4, lines 1-33).

Re claim 6: Vanttila teaches an apparatus, wherein the controllable display is an LCD 20 (col. 4, line 15).

Re claim 7: Vanttila discloses an apparatus, wherein the number of predetermined zones or directions is user selectable (col. 3, lines 55-67).

Re claim 13: Vanttila teaches an apparatus, wherein the plurality of keys is a 12-key telephone numeric keypad, and the additional discrete data entry values are alphabetic data values (col. 3, lines 38-44).

Re claim 17: Vanttila discloses and apparatus, further comprising a zone or direction identification system receiving zone data from each key (col. 3, lines 46-54) and generating state data from the zone/position data (col.2, lines 7-14).

Re claim 18: Vanttila teaches an apparatus, which further comprising a sequence identification system receiving state data and sequence data from one or more keys and translating the state data and sequence data into the data value (col. 2, lines 1-15 and col. 4, lines 58-67; col. 5 and 6, lines 1-37).

Re claim 19: Vanttila discloses an apparatus, which further comprising a soft key 2B, 2C generation system generating user-readable display data associated with one or more of the keys (col. 4, lines 18-33).

Re claim 20: Vanttila teaches an apparatus, which further comprising a soft key identification system translating the data value based on soft key definition (col.4, lines 34-42).

Office Action, pages 2-4.

The Applicant respectfully traverses these rejections. Anticipation under section 102 can be found only if a single reference shows exactly what is claimed. *Titanium Metals Corp.*

*v. Banner*, 778 F.2d 775, 227 U.S.P.Q. 773 (Fed. Cir. 1985). For a prior art reference to anticipate under section 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). In order to maintain a proper rejection under section 102, a single reference must teach each and every element or step of the rejected claim, else the reference falls under section 103. *Atlas Powder v. E.I. du Pont*, 750 F.2d 1569 (Fed. Cir. 1984).

In the present case, Muller cannot anticipate the Applicant's claims because Muller does not disclose all of the elements set forth in those claims. Specifically, independent claim 1 recites a data entry device having a key that has "a user readable indication of the first data entry value and each of the one or more additional discrete data entry values." As amended, independent claim 12 recites a data entry device having a plurality of keys, each key having "a user readable indication of the first data entry value and each of the one or more additional discrete data entry values." Finally, independent method claim 21 recites a method of programming a programmable data entry device that has a key having a "a user readable indication of the first data entry value." The method recited in claim 21 comprises the act of "generating a display that includes a user readable indication corresponding to the additional discrete data entry value, the user readable indication being indicative of the at least one additional predetermined direction." Thus, all of the Applicant's independent claims each recite or apply to data entry devices having keys that either have or are associated with user readable indications corresponding to each of their discrete data entry values.

The Examiner concedes that the recited limitations are missing from the Vanttila reference:

Secondly, the applicant argues that the prior art of record, Vanttila fails to recite that the actuator as having a user readable indication of each of the additional data entry values (see page 6, 5<sup>th</sup> paragraph of applicant's responses).

*The examiner agrees with the applicant's assessment.* Nevertheless, the claimed invention does not specifically recite that each key/actuator has a unique user readable indication." Should the examiner's interpretation be erroneous, a 112 2<sup>nd</sup> paragraph rejection (vague and indefinite) is applied to the claimed invention and the applicant is respectfully requested to differentiate the limitation "the key having a user readable indication" with "depressing the key." In other terms, make the distinction among all the keys with different applications and means. Therefore the examiner retains the rejection as set forth in the previous office action (see paper #2).

Office Action, page 7 (emphasis added).

Because amended independent claims 1, 12 and 21 each clearly include elements admitted to be missing from the Vanttila reference, those claims and the claims that depend from them cannot be anticipated by Vanttila. Accordingly, the Applicant respectfully requests withdrawal of the rejection of claims 1-7, 12 and 13 under Section 102 based on Vanttila. The Applicant additionally respectfully requests the Examiner to refrain from applying a similar rejection to independent claim 21 as amended and dependent claims 22-24.

### **The Rejections Under 35 U.S.C. § 103**

The Examiner rejected claims 8-11 and 14 under 35 U.S.C. § 103(a) as obvious based on a modification of the Vanttila reference. Additionally, claim 15 was rejected under Section 103 based on the combination of Vanttila, as modified, in view of Dodd. With respect to claims 8-11 and 14, the Examiner stated:

The teachings of Vanttila have been discussed above.

Re claims 8-11: Vanttila fails to teach a design with specific key shapes (i.e. square, circular, hexagonal, and octagonal).

However, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ different shapes of the key in the system of Vanttila in order to provide to attract consumer's attention. Furthermore, the different shapes and sizes of the key do not carry any unexpected result and novelty; only offer a different look and size of the device. Therefore, such modification would have been an obvious extension as taught by Vanttila.

Re claim 14: Vanttila fails to teach a design with a three-key watch keypad.

However, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to utilize a contracted three-key keypad version in the system of Vanttila wherein each key carry four states (i.e. the first key has functions "1, 2, 3, and 4"). Furthermore, the above system can be compared and substituted with different design either of "a three-key" or "a four-key" keypad (such as the teachings of Krishnan U.S. 6,377,685) wherein each key can be programmed to display or depress one or more numeric data values. Moreover, such modification would have been an obvious extension of the teaching of Vanttila, therefore an expedient.

Office Action, pages 4-5.

With respect to the rejection of claim 15 based on the Vanttila reference, as modified, in view of the Dodd reference, the Examiner stated:

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vanttila (US. 6,173,194) as modified in claim 14 above, and further in view of Dodd (U.S. 6,127,949).

The teachings of Vanttila have been discussed above.

Vanttila fails to teach a Qwerty keyboard.

Dodd teaches an ergonomic computer keyboard, which includes a Qwerty keyboard (cal. 10, lines 37-55).

In view of the teaching Dodd, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ a Qwerty keypad into the teachings of Vanttila as modified as claim 14 above so as to maintain the conventional layout by separating the alphabetic data entry values to one side and the numeric data entry values on the other side of the keyboard. Furthermore, such modification would be beneficial to the user in helping reducing stress of the fingers and wherein multiple data entry values (i.e. alphabetic or numeric) could be programmed one key on the keypad, and user selectable without typing expertise. Moreover, such modification would have been an obvious extension of the teaching of Vanttila as modified above in claim 14.

Office Action, pages 5-6.

The Applicant respectfully traverses these rejections. The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985). When prior art references require a selected combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gained from the invention itself, i.e., something in the prior art as a whole must suggest the desirability, and thus the obviousness,

of making the combination. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988).

Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988).

In the present case, neither the Vanttila reference as modified by the Examiner nor the combination of Vanttila, as modified, and Dodd can render the Applicant's claims obvious under Section 103 because that combination does not include all of the elements recited in the Applicant's amended claims. As set forth above in the discussion of the rejection under Section 102, independent claims 1, 12 and 21 each recite or apply to data entry devices having keys that either have or are associated with user readable indications corresponding to each of their discrete data entry values. Those limitations are admitted by the Examiner to be lacking from Vanttila. Further, the Examiner makes no assertion that the recited limitations are found in the Dodd reference.

Accordingly, no combination of Vanttila and Dodd can render the Applicant's claims obvious because no such combination can possibly include all elements of the Applicant's independent claims. The Applicant respectfully requests withdrawal of the rejection of claims 8-11, 14 and 15 based on Vanttila as modified by the Examiner or Vanttila, as modified, in combination with Dodd.



### **The Objection to Claims 21-25**

As set forth above, the Examiner objected to claims 21-25, but no statutory basis was given. Specifically, the Examiner stated:

Re claims 21-25: the applicant argues that the prior art of record, Vanttila, fails to teach a technique for providing a soft key in a system having a hardware key with more than two states (see page 7, last paragraph of applicant's responses).

The examiner objects to the claimed invention. The lack of an art rejection with this Office action is not an indication of allowable subject matter (i.e., even though claims 21 is rewritten or amended to overcome the rejection as discussed above). The disclosure/claimed language is such that it is impractical to conduct a reasonable search of the prior art by the examiner. The claim (21) recites the limitations "a method for providing a soft key with a hardware key (which could be used in any system having a keypad/keyboard such as a cellular phone, personal digital assistant PDA, computer or the like) having more than two states comprising a plurality of data zones, each of the plurality of data zones corresponding to one of the states of the hardware key". The language of the claimed invention is so broad and unrelated to the (previous) apparatus claims, a data entry device. The applicant is respectfully requested to explicitly define the claimed invention and related terms/limitations such as "data entry zones (104, 106, 108, 110)" and "data entry states (302, 304, 306, 308...)" and show/prove how they are different from each other also their different use and/or application. Should the examiner's interpretation be incorrect, an election/restriction is applied to the two groups or inventions.

Office Action, pages 7-8.

The Applicant does not fully understand the objection to claims 21-25 because no statutory basis for the objection is set forth by the Examiner. Nonetheless, the Applicant has amended claims 21-24 to more distinctly set forth the Applicant's invention. As amended, independent method claim 21 clearly sets forth a method of programming a data entry device. The method is applicable to a system having a key that includes "at least one hardware key

capable of being depressed and actuated in at least one additional predetermined direction..., the hardware key having a user readable indication of the first data entry value.”

Additionally, claim 21 includes the act of “generating a display that includes a user readable indication corresponding to the additional discrete data entry value, the user readable indication being indicative of the at least one additional predetermined direction.” Because these characteristics are clearly set forth in amended independent claim 21 and no prior art rejection is lodged against that claim, the Applicant respectfully requests withdrawal of the Examiner’s objection and an indication of the allowability of claims 21-24.

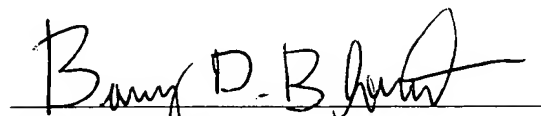
### **Conclusion**

In view of the amendments and remarks set forth above, the Applicant respectfully requests withdrawal of all of the Examiner’s rejections and objections. Furthermore, the Applicant asserts that an indication of the allowability of claims 1-15 and 21-24 is appropriate. If the Examiner believes that a telephonic interview will help speed this

application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

Date: October 16, 2003

A handwritten signature in black ink, appearing to read "Barry D. Blount", written over a horizontal line.

Barry D. Blount

Reg. No. 35,069

(281) 970-4545

**CORRESPONDENCE ADDRESS:**

Intellectual Property Administration  
Legal Department, M/S 35  
HEWLETT-PACKARD COMPANY  
P.O. Box 272400  
Fort Collins, CO 80527-2400